

## Prevalence of unprofessional social media content among young vascular surgeons



Scott Hardouin, MD,<sup>a</sup> Thomas W. Cheng, MS,<sup>a</sup> Erica L. Mitchell, MD,<sup>b</sup> Stephen J. Raulli, MPhil,<sup>a</sup> Douglas W. Jones, MD, MPH,<sup>a</sup> Jeffrey J. Siracuse, MD,<sup>a</sup> and Alik Farber, MD, MBA,<sup>a</sup> *Boston, Mass; and Salem, Ore*

### ABSTRACT

**Objective:** It has been demonstrated that publicly available social media content may affect patient choice of physician, hospital, and medical facility. Furthermore, such content has the potential to affect professional reputation among peers and employers. Our goal was to evaluate the extent of unprofessional social media content among recent vascular surgery fellows and residents.

**Methods:** The Association of Program Directors in Vascular Surgery directory was used to compile a list of graduating vascular surgery trainees from 2016 to 2018. Neutral Facebook, Twitter, and Instagram accounts were used to search for publicly available information. All content was screened by two separate investigators for prespecified clearly unprofessional or potentially unprofessional content. Clearly unprofessional content included: Health Insurance Portability and Accountability Act violations, intoxicated appearance, unlawful behavior, possession of drugs or drug paraphernalia, and uncensored profanity or offensive comments about colleagues/work/patients. Potentially unprofessional content included: holding/consuming alcohol, inappropriate attire, censored profanity, controversial political or religious comments, and controversial social topics. Descriptive data were compiled and Fisher exact test was used for categorical comparisons.

**Results:** There were 480 vascular surgeons identified. 325 (68%) were male, 456 (95%) held MD degrees, and 115 (24%) were integrated (0 + 5) vascular surgery residents. Of these, 235 had publicly identifiable social media accounts across all platforms. Sixty-one (26%) account holders had either clearly unprofessional or potentially unprofessional content. Eight accounts (3.4%) contained content categorized as clearly unprofessional: obvious alcohol intoxication in three Facebook accounts and uncensored profanity or offensive comments about colleagues/work/patients in one Facebook and five Twitter accounts. Potentially unprofessional content appeared in 58 accounts (25%) and included holding/consuming alcohol (29 accounts, 12.3%), controversial political comments (22 accounts, 9.4%), inappropriate/offensive attire (9 accounts, 3.8%), censored profanity (8 accounts, 3.4%), controversial social topics (6 accounts, 2.5%), and controversial religious comments (2 accounts, .9%). There was no significant difference in unprofessional content across sex, training paradigm (MD vs non-MD), or residency track (0 + 5 or 5 + 2; all  $P > .05$ ). However, there was more unprofessional content for those who self-identified as vascular surgeons (33% vs 17%;  $P = .007$ ).

**Conclusions:** One-half of recent and soon to be graduating vascular surgery trainees had an identifiable social media account with more than one-quarter of these containing unprofessional content. Account holders who self-identified as vascular surgeons were more likely to be associated with unprofessional social media behavior. Young surgeons should be aware of the permanent public exposure of unprofessional content that can be accessed by peers, patients, and current/future employers. (*J Vasc Surg* 2020;72:667-71.)

**Keywords:** Professionalism; Social media; Trainee; Vascular surgery

Social media has increasingly become a prominent part of our everyday lives where individuals use social media to share and create original content, ever since the creation of Facebook in 2004. However, individuals also use social media as part of their informed medical decisions such as for symptom- or provider-specific

research. It is estimated that up to 44% of adults search for their doctor or other health professional online and up to 41% of adults report that information found specifically on social media would affect their choice in a specific physician or medical facility.<sup>1,2</sup> Furthermore, research has revealed that 35% of practicing physicians have

From the Division of Vascular and Endovascular Surgery, Boston Medical Center, Boston University School of Medicine, Boston<sup>a</sup>; and the Division of Vascular Surgery, Salem Health Vascular & Endovascular Surgery, Salem.<sup>b</sup>

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Correspondence: Alik Farber, MD, MBA, Boston University School of Medicine, Boston Medical Center, 1 Boston Medical Center Place, Ste D506, Boston, MA 02118 (e-mail: [alikh.farber@bmc.org](mailto:alikh.farber@bmc.org)).

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received a friend request from a patient or family member and 16% of physicians report visiting the online profile of a patient or family member.<sup>3</sup>

It has never been more important for physicians to be cognizant of their social media footprint. A survey reported that 87% of physicians used widely available social media for personal use that may affect a provider's professional reputation among peers and employers.<sup>4</sup> This concern for developing or maintaining a positive professional reputation has prompted the American Medical Association (AMA) and American College of Physicians to develop social media policies to assist physicians in their publicly available social media footprint.<sup>5,6</sup> The most recently issued statement from the AMA says "physicians must recognize that actions online and content posted may negatively affect their reputations among patients and colleagues, may have consequences for their medical careers and can undermine public trust in the medical profession."<sup>7</sup>

Our study's purpose was to evaluate how well vascular surgeons, as a community, are moderating their social media presence. Although there have been two prior studies evaluating the degree unprofessional content on Facebook among general surgery and urology residents, this is the first look at content posted by those either already in practice or on the verge of graduation. If anyone should be cautious of their social media content, it should be those early in their careers and actively looking for a job. We hypothesized that as individuals progressed in their professional careers, they would become more cognizant of their social media footprint but there would always be a degree of unprofessionalism because of inherent subjectivity. We decided to focus our efforts on evaluating the professionalism exhibited by recent, and soon to be, graduates because they will soon be the face of our medical specialty, and young adults continue to be the most active on social media.

## METHODS

The Association of Program Directors in Vascular Surgery directory was used to compile a list of graduating vascular surgery trainees from 2016 to 2018. Although Facebook continues to be the predominant social media platform, 73% of U.S. adults use more than one platform and the average adult uses at least three.<sup>8</sup> Therefore, in an attempt to replicate searches performed by the general public; neutral accounts were created on three of the most popular social media platforms: Facebook, Twitter, and Instagram. Because these neutral accounts had no connections to other accounts, it ensured that the content we viewed was accessible to any member of the public. The Boston University School of Medicine institutional review board approved the study and informed consent was waived.

Each surgeon was searched by their name, location of training, and any other public data that could be

## ARTICLE HIGHLIGHTS

- **Type of Research:** Retrospective review
- **Key Findings:** Among 480 young vascular surgeons, there were 235, nearly one-half, with publicly identifiable social media accounts on Facebook, Twitter, and Instagram. Sixty-one (26%) account holders had unprofessional or potentially unprofessional content. Unprofessional content was more frequent in those self-identified as vascular surgeons (33% vs 17%;  $P = .007$ ).
- **Take Home Message:** Young surgeons should be aware of the permanent public exposure of unprofessional content that can be accessed by peers, patients, and current/future employers.

accessed by the general public. All searches were performed in January and February 2018, meaning that the graduating classes of 2016 and 2017 were already out in practice and the class of 2018 was well into their search for jobs. There were a total of three screeners, and all content on each platform was screened by two separate investigators for prespecified material categorized as either (1) clearly unprofessional or (2) potentially unprofessional. S.H. was a 33-year-old male vascular fellow who performed searches on Facebook and Instagram. T.C. was a 28-year-old male research coordinator and medical school applicant who searched Facebook and Twitter. S.R. was a 37-year-old male medical student who searched Twitter and Instagram. Clearly unprofessional content included: Health Insurance Portability and Accountability Act (HIPAA) violations, intoxicated appearance, unlawful behavior, possession of drugs or drug paraphernalia, and uncensored profanity or offensive comments about colleagues/work/patients. Potentially unprofessional content included: holding/consuming alcohol, inappropriate attire, censored profanity, controversial political or religious comments, and controversial social topics. These categories were based on previously published studies of unprofessional social media content among general surgery and urology residents.<sup>9,10</sup> We chose to use similar categories to allow as direct a comparison as possible between our results and those already performed in other specialties. Any differences among the individual investigators, if they occurred, were resolved by consensus among the authors.

**Statistical analysis.** After deidentifying the dataset, descriptive data were compiled and Fisher exact test was used for categorical comparisons, respectively, for surgeon's sex, training paradigm (MD vs non-MD), residency track (integrated (0 + 5) vs traditional (5 + 2), and self-identification as a vascular surgeon. Self-identification as a vascular surgeon was defined as if

**Table I.** Demographics of profiles with unprofessional content

	Total accounts, No.	Public account, No. (%)	Male, No. (%)	MD degree, No. (%)	Integrated resident, No. (%)	Self-identified as vascular surgeon, No. (%)
Facebook	201	193 (96)	136 (68)	187 (93)	51 (25)	84 (42)
Twitter	55	46 (84)	39 (71)	53 (96)	15 (27)	29 (53)
Instagram	38	18 (47)	26 (68)	36 (95)	10 (26)	7 (18)

vascular surgeon appeared as his or her job title, within the description, or references to the profession were identified within their profile. Statistical significance was set as a *P* value of  $<.05$ .

## RESULTS

There were 480 vascular surgeons identified, of which 325 (68%) were male, 456 (95%) held MD degrees, and 115 (24%) were integrated (0 + 5) residents. There were 235 (49%) surgeons with an identifiable account on at least one of the social media platforms that consisted of 201 (42%) Facebook accounts, 55 (11.5%) Twitter accounts, and 38 (8%) Instagram accounts (Table I). There was evidence of either unprofessional or potentially unprofessional content from 61 (26%) surgeons on at least one social media platform. There were eight (3.4%) who displayed behavior categorized as clearly unprofessional and 58 (25%) posted material that was potentially unprofessional. There were no discrepancies among the reviewers that required a consensus vote among the authors.

Among those with a Facebook account, 193 (96%) accounts were visible to the public (ie, not set to private), 136 (68%) were male, 51 (25%) were integrated residents, 187 (93%) held MD degrees, and 84 (42%) self-identified as a vascular surgeon (Table I). There were 46 (23%) Facebook accounts that displayed evidence of either unprofessional or potentially unprofessional content where four (2%) accounts had clearly unprofessional content and 61 (30.4%) contained evidence of potentially unprofessional content (Table II). There were no instances of HIPAA violations and the most common forms of potentially unprofessional content were holding alcohol (25 accounts, 12.4%) and controversial political/religious/social comments (20 accounts, 10%). Inappropriate attire included pictures in underwear, provocative Halloween costumes, and provocative posing in bikinis/swimwear. Controversial political and religious comments were any derogatory or demeaning comments directed toward an individual or specific faith. Controversial social comments were largely limited to comments centered around specific stances on abortion and gun control.

On Twitter, 46 (84%) accounts were visible to the public, 39 (71%) were male, 53 (96%) held MD degrees, 15 (27%) were integrated residents, and 29 (53%) self-identified as a vascular surgeon (Table I). There were 14 (25%) accounts that displayed evidence of either unprofessional or potentially unprofessional content (Table II). Five (9%)

Twitter accounts displayed evidence of clearly unprofessional content in the form of uncensored profanity and 12 (22%) displayed potentially unprofessional content.

On Instagram, 18 (47%) of the accounts were visible to the public, 26 (68%) were male, 36 (95%) held MD degrees, 10 (25%) belonged to integrated residents, and seven (18%) self-identifying as a vascular surgeon (Table I). There were six (16%) accounts with evidence of potentially unprofessional content as they contained images of the young surgeon holding alcohol (Table II). There was no evidence of clearly unprofessional content.

Although the primary purpose of the study was to evaluate the degree of unprofessional content, we did encounter some evidence of positive professional posts. On Facebook, there were nine accounts that discussed results of recently published studies. There were another nine accounts that contained evidence of team work where there were threads discussing the best way to approach a difficult case/scenario. There were two accounts that promoted upcoming conferences and three accounts that posted links for vascular job openings. On Twitter, there were 22 accounts discussing articles, 15 discussing difficult cases, and 17 promoting conferences.

Univariable analysis of the entire data set revealed that the instance of clearly unprofessional or potentially unprofessional content did not differ significantly between men and women (24% vs 30%; *P* = .3, respectively), MD degree holders vs non-MD degree holders (26% vs 29%; *P* = .8), or integrated (0 + 5) residents versus traditional (5 + 2) fellows (28% vs 25%; *P* = .7). The only significant difference observed was a higher instance of clearly unprofessional or potentially unprofessional content in accounts where the young surgeon self-identified as part of vascular surgery versus accounts that did not self-identify in the field of vascular surgery (33% vs 17%; *P* = .007; Table III). In Facebook and Twitter accounts, there were no significant differences in any unprofessional content between sex, type of medical degree, and vascular surgery training pathway except for accounts that self-identifying as part of vascular surgery that was significantly higher for clearly professional or potentially unprofessional content for Facebook (31% vs 17%; *P* = .03) and Twitter (38% vs 12%; *P* = .03).

## DISCUSSION

In 1999, the Accreditation Council for Graduate Medical Education and American Board of Medical Specialties developed the six core competencies of

**Table II.** Observed content

	Clearly unprofessional			Potentially unprofessional			
	HIPAA violation, No. (%)	Intoxicated appearance, No. (%)	Offensive comments, No. (%)	Holding alcohol, No. (%)	Inappropriate attire, No. (%)	Censored profanity, No. (%)	Political/religious/social comments, No. (%)
Facebook (N = 201)	0	3 (1.5)	1 (0.5)	25 (12.4)	9 (4.5)	7 (3.5)	20 (10)
Twitter (N = 55)	0	0	5 (9.1)	3 (5.5)	0	1 (1.8)	10 (18.2)
Instagram (N = 38)	0	0	0	6 (15.7)	0	0	0
Any account (N = 235)	0	3 (1.3)	6 (2.6)	29 (12.3)	9 (3.8)	8 (3.4)	30 (12.8)

HIPAA, Health Insurance Portability and Accountability Act.

**Table III.** Categorical comparison of unprofessional content

	Sex			Training			Track			Self-identified as vascular surgeon		
	Male	Female	P value	MD	Non-MD	P value	0 + 5	5 + 2	P value	Yes	No	P value
Total unprofessional content	24%	30%	.3	26%	29%	.8	28%	25%	.7	33%	17%	.007
Facebook unprofessional content	20%	29%	.2	23%	29%	.5	24%	23%	1	31%	17%	.03
Twitter unprofessional content	28%	19%	.7	26%	0%	1	20%	28%	.7	38%	12%	.03
Instagram unprofessional content	16%	15%	1	17%	0%	1	10%	18%	1	29%	13%	.3

medical education. Professionalism is one of the six core competencies and has continued to be emphasized within this context and extends beyond just direct patient encounters.<sup>11</sup> Despite this, a 2012 national survey of state medical boards found that 92% of responding medical boards had dealt with at least one violation of online professionalism.<sup>12</sup> Violations ranged from inappropriate patient communications to derogatory remarks and depictions of intoxications. Our evaluation of recent vascular surgery graduates revealed that almost one-half of graduates had publically identifiable account and one-quarter of them contained content that could be deemed inappropriate by the public, peers, or a medical board.<sup>12</sup>

The AMA has attempted to provide some guidance to physicians who choose to use social media.<sup>7</sup> Guidance such as this represents a sobering approach to our online presence, which is not widely known or practiced. Both general surgery and urology have performed similar studies looking at the degree of unprofessional content on Facebook.<sup>9,10</sup> Although our study had a lower rate of clearly unprofessional content (3.4% compared with 12.2% for general surgery and 13.4% for urology), the one category that was surprising absent from our study was of violations of protected health information

(HIPAA).<sup>9,10</sup> That we did not find any HIPAA violations in our current study is encouraging because this represents a severe professional failure with ethical and medicolegal implications.

Although HIPAA violations were not encountered, holding or consuming alcohol continues to be prevalent. Our observed rate of 12.3% on any platform mirrors that found among recent urology residency graduates (13.9%).<sup>9</sup> The unprofessional nature of simple alcohol consumption is potentially a topic of debate, but there is evidence that the general public might hold physicians to a higher standard. When the general public was asked to rate the appropriateness of and comfort with future physicians holding alcohol in Facebook pictures, the mean score was 2.69 (on a scale of 1 to 5; with 5 being very appropriate and 1 being not at all appropriate).<sup>13</sup> Consequently, physicians should be cognizant of any behaviors that may be construed as unprofessional even if such behaviors may not raise objection in close social circles.

Despite our findings, it was notable that the most severe types of unprofessional media content were relatively uncommon, especially when compared with rates seen in other disciplines.<sup>9,10</sup> This suggests that recent, or soon to be, vascular surgery graduates, despite heavy social media presence, are at least somewhat



aware that social media has the potential to expose practitioners to serious ethical and medicolegal risk. However, posting of potentially unprofessional content is more commonplace and not treated with the same level of caution.

The AMA encourages physicians to “use privacy settings to safeguard personal information and content to the extent possible.”<sup>7</sup> The suggestion to use privacy settings is not unique to the AMA. Thus, it was somewhat surprising to find that 93% of Facebook accounts, 84% of Twitter accounts, and 47% of Instagram accounts did not use the readily available privacy settings offered by the various platforms. Privacy settings alone are not absolute barriers, but they are the simplest way to help mitigate a physician’s public exposure.

Unprofessional social media content not only reflects poorly on the individual, but also the medical profession as a whole. To investigate the exposure of the vascular community at large, we searched profiles for any content that might link the individual to vascular surgery. We found that 33% of young vascular surgeons that self-identified as vascular surgeons displayed evidence of unprofessional content. Although most individuals view their social media accounts as strictly for personal use, this finding points to a lack of awareness that individual content may, as the AMA describes, “undermine public trust in the medical profession.”<sup>7</sup>

There are several limitations of our study. Younger individuals are the heaviest users of social media, so that we looked at recent graduates only might not be generalizable to older vascular surgeons and the field at large. Second, the definitions of “clearly” and “potentially” unprofessional may be subjective, but it is reflective of the fact that individuals vary in their opinion of what is considered socially acceptable public behavior. Last, although we investigated the content on each profile since its creation, we did not make note of the year that each violation occurred. Thus, we cannot make any conclusions about trends in the posting of unprofessional content over time. Additionally, our study did not assess whether these social media profiles had an effect on patients.

## CONCLUSIONS

One-half of recent and soon-to-be graduating vascular surgery trainees had an identifiable social media account, with nearly one-quarter of these containing either clearly unprofessional or potentially unprofessional content. Account holders who self-identified as vascular surgeons were more likely to be associated with unprofessional social media behavior. Young surgeons should be aware of the permanent public exposure of unprofessional content that can be accessed by peers, patients, and current/future employers.

## AUTHOR CONTRIBUTIONS

Conception and design: SH, AF

Analysis and interpretation: SH, TC, EM, SR, DJ, JS, AF

Data collection: SH, TC, SR

Writing the article: SH, TC, JS, AF

Critical revision of the article: SH, TC, EM, SR, DJ, JS, AF

Final approval of the article: SH, TC, EM, SR, DJ, JS, AF

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## REFERENCES

1. Fox S. Health topics. Pew Research Center. Available at: <https://www.pewinternet.org/2011/02/01/health-topics-3/>. Accessed June 1, 2018.
2. PricewaterhouseCoopers Health Research Institute. Social media “likes” healthcare: from marketing to social business. Available at: <https://www.pwc.com/us/en/health-industries/health-research-institute/publications/pdf/health-care-social-media-report.pdf>. Accessed June 1, 2018.
3. Bosslet GT, Torke AM, Hickman SE, Terry CL, Helft PR. The patient-doctor relationship and online social networks: results of a national survey. *J Gen Intern Med* 2011;26:1168-74.
4. Modahl M, Tompsett L, Moorhead T. Doctors, patients, and social media. QuantiaMD. Available at: <http://www.quantiamd.com/q-qcp/DoctorsPatientSocialMedia.pdf>. Accessed June 3, 2018.
5. Shore R, Halsey J, Shah K, Crigger BJ, Douglas SP. Report of the AMA Council on Ethical and Judicial Affairs: professionalism in the use of social media. *J Clin Ethics* 2011;22:165-72.
6. Snyder L. American College of Physicians Ethics Manual: sixth edition. *Ann Intern Med* 2012;156:73-104.
7. American Medical Association. Professionalism in the use of social media. Available at: <https://www.ama-assn.org/delivering-care/ethics/professionalism-use-social-media>. Accessed June 1, 2018.
8. Smith A, Anderson M. Social media use in 2018. Pew Research Center. Available at: <http://www.pewinternet.org/2018/03/01/social-media-use-in-2018/>. 2018 Mar 1. Accessed June 1, 2018.
9. Koo K, Ficko Z, Gormley EA. Unprofessional content on Facebook accounts of US urology residency graduates. *BJU Int* 2017;119:955-60.
10. Langenfeld SJ, Cook G, Sudbeck C, Luers T, Schenarts PJ. An assessment of unprofessional behavior among surgical residents on Facebook: a warning of the dangers of social media. *J Surg Educ* 2014;71:e28-32.
11. American Board of Medical Specialties. Based on core competencies. American Board of Medical Specialties. Available at: <https://www.abms.org/board-certification/a-trusted-credential/based-on-core-competencies/>. Accessed June 6, 2018.
12. Greysen SR, Chretien KC, Kind T, Young A, Gross CP. Physician violations of online professionalism and disciplinary actions: a national survey of state medical boards. *JAMA* 2012;307:1141-2.
13. Jain A, Petty EM, Jaber RM, et al. What is appropriate to post on social media? Ratings from students, faculty members and the public. *Med Educ* 2014;48:157-69.

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